

**SITUATION REPORT NO. 1**

**INCIDENT NO. 2000-016**

**DATE: February 29, 2000**

**TIME: 2:00 p.m.**

**TO:** Governor Edward T. Schafer  
State Capitol  
Bismarck, N.D. 58505

1. NATURE OF DISASTER: Spring Flooding – Rapid snowmelt resulting from unseasonably warm temperatures during the February 20-26 week, followed by heavy rains on frozen grounds, inundated roadways in Burleigh County and caused lowland and overland flooding along Apple Creek. Additionally, high water tables continue to cause safety- and health-related problems in Barnes County.
2. DEATHS AND INJURIES: In Barnes County, residents are experiencing respiratory problems that health officials believe are related to mold and mildew found in wet basements where year-round pumping efforts are taking place.
3. DAMAGES: The National Weather Service (NWS) reported that rapid snowmelt and heavy rain resulted in extensive runoff throughout Burleigh County during the February 25-27 weekend. Precipitation amounts that totaled 1.13 inches for the weekend contributed to a new precipitation record for the Bismarck area for February. So far this month, the NWS has recorded 1.74 inches of precipitation for the Bismarck area, 1.33 inches above normal. The previous record was reached in 1998 when precipitation for February measured 1.67 inches. Unseasonably warm temperatures, as well as frozen grounds and ice- and snow-plugged culverts, also factored into the extensive runoff. Temperatures ranged as much as seven to 18 degrees above normal during the week of February 20-26. Additionally, existing snow cover contained up to one-half inch of water.

In the city of Bismarck, three homeowners reported that rapid snowmelt on February 25-27 flooded their basements. Fifteen roadways were overtopped by runoff, requiring public works crews to close roads the evening of February 25. All but three roadways have been reopened. These roadway conditions are still being monitored.

The Bismarck Office of the NWS issued a flood warning for Apple Creek near Menoken after a rapid snowmelt caused the creek to rise as much as 10 feet during the February 25-27 weekend. The creek crested at 16.6 feet on February 27, 1.6 feet above its 15-foot flood stage. The level measured 15.19 feet February 29 and was receding. During the weekend, as the creek level rose, ice was breaking up, and water was flowing on the top of the ice. The flood warning will remain in effect until the creek level drops below flood stage.

Weather observers recorded up to one foot of snowfall during a winter storm system that moved into the Dakotas on February 25-26. Snow accumulations ranged from five inches near New Salem, eight inches in Center, eight inches in a location 18 miles south of Rugby and 12 inches at the Grant County/Morton

County line. The eastern edge of the heavy snowband extended from Lemmon, S.D. to Devils Lake, and the western edge extended from Dickinson to Bottineau. In eastern North Dakota, one-half inch or less of precipitation fell in the Devils Lake Basin. Precipitation amounts throughout the Red River Valley ranged from 1.25 inches to two inches. Some rivers in eastern North Dakota rose as much as two to three feet, but still were well below flood stage, staff at the Grand Forks office of the NWS reported.

Before the weekend's storm, both the Bismarck and Grand Forks Offices of the NWS issued Spring Snowmelt Flood Outlooks for river basins in North Dakota. At that time, hydrologists expected to see crests below flood stage at gauging points along the Red River of the North. Snow depths measured six inches or less in the southern and northeastern portions of the Red River Basin; elsewhere, there was minimal or no snow present.

Based on conditions at the time of the outlook, no flooding was expected from snow currently on the ground in the James, Souris and Missouri River Basins. Flooding in these three basins was also not expected if normal precipitation takes place during the next four weeks and is added to current snowpack. However, above normal precipitation would increase the potential for flooding. The month of February has been wetter than normal with above normal temperatures; early winter conditions were drier and warmer than normal.

Assuming average precipitation and evaporation rates take place through August, NWS is forecasting a crest of 1,446.5 feet for Devils Lake. However, if above normal precipitation takes place through August, then the lake could reach an elevation of 1,448 feet. The lake level at Creel Bay measured 1,446.24 feet on February 29. Although the predicted lake level of 1,446.5 feet is below last summer's maximum daily average of 1,447.2 feet, thousands of acres remain inundated and flooding continues to present a hazard to area residents. Because of the high lake level, the N.D. State Water Commission expects it will take several dry years before the risk of additional flooding is reduced.

Hydrologists have cautioned that potential for spring snowstorms still exists. Snow associated with these storms tends to have a higher water content because of warmer spring temperatures. The NWS plans to issue additional Spring Flood Outlooks on March 10 and March 24.

Since November, continuing problems related to high water tables have caused the failure of 11 private waste water systems in Barnes County. The county sanitarian has been assisting the owners of these systems. Additionally, landslides resulting from these high water tables have impacted eight homes. Owners of these homes reported that floors are heaving and cracking, and basement walls have collapsed or cracked. Throughout the county, residents continue year-round pumping of basements.

#### 4. RESOURCES:

LOCAL: Local agencies contributing to preparedness and response efforts include: county sanitarians, public works departments, law enforcement agencies, communications centers, emergency management offices, fire and rescue, ambulance services, city and county commissions and administrative offices. Private contractors have also provided assistance.

STATE: State agencies providing assistance include State Radio Communications and North Dakota Emergency Management.

FEDERAL: The NWS has been providing technical support assistance.

5. VOLUNTEER ACTION: Members of the North Dakota Volunteer Organizations Active in Disaster (VOAD) will meet March 10 at 1 p.m. at the Minn-Kota Chapter of the American Red Cross Office in Moorhead, Minn. Members will review the spring flood potential and will discuss an overall disaster plan for the VOAD.
6. MAJOR ACTIONS: The St. Paul District of the U.S. Army Corps of Engineers (USACE), in conjunction with the North Dakota and Minnesota Divisions of Emergency Management, will conduct flood preparedness seminars in the Red River of the North Valley on March 9 and 10. The seminars will provide federal, state and local agencies with the opportunity to plan for a coordinated response to a potential spring flood. The March 9<sup>th</sup> seminar will be held at 1 p.m. at the Grand Forks Civic Auditorium basement meeting room. The second seminar will be held at 9 a.m. March 10 at the Clay County Courthouse basement.

In Burleigh County, city and county public works crews marked inundated roadways and monitored flood conditions. Crews have begun repair of washouts. The emergency management office issued news releases alerting the public to flood-related problems.

Crews from the Barnes County Highway Department are also monitoring road conditions. The emergency manager has been working with the township officers to identify and prepare for potential problems related to high water tables.

7. ASSISTANCE NEEDED: With the exception of continuing technical support, no additional assistance has been requested.
8. OUTSIDE HELP ON SCENE: No outside assistance has been reported at this time.
9. OTHER: Situation Reports published by North Dakota Emergency Management are posted on the Division's Internet home page. The address is:  
<http://www.state.nd.us/dem>.

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Douglas C. Friez, State Director